CUMULATIVE INDEX 1996

Volume 15

January GOLF INJURIES, pages 1-206

April THE ATHLETIC ELBOW AND WRIST, PART II:

COMMON AND OVERUSE INJURIES, pages 207-443

July MENISCAL REPAIR, pages 445-634

October ARTHROSCOPIC SURGERY, PART I, pages 635-837

Note: Page numbers of article titles are in boldface type.

Achilles tendinitis, golf-associated, 141,

treatment of, 141-142

Acromioclavicular joint, injuries of, arthroscopic treatment of, 699 diagnosis of, 697–699

Acromioplasty, arthroscopic, rehabilitation after, 667–668

technique of, 728-731

Allografts, meniscal. See Meniscal allografts. Angiogenin, for meniscal repair, 626

Ankle, and foot, arthroscopy of, 805–824 portals for, 805–806

and foot considerations, in golf, 129-146 anterior bony, impingement lesions of,

arthroscopy of ankle in, 812–813 arthroscopy of, arthors' preferred technique for, 808–810

complications of, 819

in anterior bony impingement lesions, 812-813

in anterior soft-tissue impingement lesions, 810-811

in lateral ankle instability, 818-819 in osteochondral lesions of talus, 813-

in syndesmotic injuries, 811 indications and contraindications for,

806-807 portal placement for, 808

setup for, 807–808 specific indications for, in athlete, 810 technique of, 807–810

instability of, lateral, arthroscopy of ankle in, 818-819 ligament injuries of, golf-associated, 142-143

treatment of, 143

ligaments of, reconstruction of, arthroscopic findings in, 799–804

discussion of, 800-803 methods and materials for, 800

syndesmotic injuries of, arthroscopy of ankle in, 811

unstable, preoperative clinical findings in, 800

Anterior cruciate ligament, deficient, in knee. See Knee, anterior cruciate ligament—deficient.

Anterior interosseous nerve syndrome (AIN), 342-344

Anxiety, performance, in golf, 197–198 Apophysis(es), injuries of, in immature athlete, 406

Arm circles, 168

Arthrofibrosis, and meniscal repair, 615–616, 617

of elbow, arthroscopy in, 278, 794-795 Arthrography, in sports-related injuries of

wrist, 755
Arthropathy, facet joint, degenerative changes in, 50

diagnosis of, 50-51 treatment of, 51

Arthroplasty, elbow, total, in golfer, 185 hip, total, in golfer, 180–182 knee, total, in golfer, 182–184

shoulder, total, in golfer, 184–185 Arthroscope, for diagnosis of shoulder injuries, 678–680, 690–692 Arthroscope (Continued) in disorders of rotator cuff, 680–688 tunnel vision of, 635–636 Arthroscopic decompression of shoulder, 701–713

Arthroscopic synovectomy, of elbow, 277–278

Arthroscopic technique(s), and portal placement, for arthroscopic all-inside meniscal repair, 485–487, 488

for meniscal repair, 465–467, 466 for meniscal repair, 613–614 complications of, 613–619 using inside-to-outside technique, 460–464

in complex meniscal tears, 516–519 complications of, 517 meniscal allograft transplantation via, 548

Arthroscopy, in athletic injuries of wrist, 219-233

in carpal tunnel release, 769-784 in rotator cuff disorders, 715-736

of elbow, 77, 261-281, 785-797 of foot and ankle, 805-824

of shoulder, 635-653

in throwing athlete, 673–700 rehabilitation of athlete after, 655–672 of wrist, 753–768

Arthrotomy, meniscal allograft transplantation via, 548 Articular cartilage, damage to, and

meniscal repair, 520
Athlete(s), immature, injuries and overuse syndromes of elbow and wrist in, 401-423

Axonotmesis, 332

Back, low. See also Low back. of golfer, 46-51 re-injury of, prevention of, 51-52

Back pain, in golf, 37-53 low. See also Low back pain.

Back stretch, for muscles from shoulders to hips, 171

Backswing, golf, 16–18 Balls, golf, 171–177

Bankart lesion, 743 Bankart repair, and capsular shift,

rehabilitation after, 666-667 arthroscopic, 737-753 advantages of, 748

lesions requiring, 743–744 limitations of, 749 technique for, 744–748

Baseball, injuries to upper extremity associated with, 210-211

Basketball, injuries to upper extremity associated with, 214-215 Biceps tendon, injuries of, arthroscopic management of, 696–697 Bicolumn fractures, 394 Bicycling, injuries to upper extremity associated with, 211–214 Blisters, golf-associated, 131–132

Blood vessels, injuries to, in meniscal repair, 518, 616

of meniscus, and meniscal repair, 450-451

Body stretch, for shoulder, upper back, and leg muscles, 177

Body twists, 166 Bone cysts, aneur

Bone cysts, aneurysmal, of upper extremity, 432 Bony exostosis, of glenoid, 697

Bony injuries, of wrist, forearm, and elbow, 373–400

Bowler's thumb, 353, 354

Brachial plexus, anatomy of, 333 Bracing, in management of elbow injuries,

Bursitis, scapulothoracic, in throwing

athlete, 699 Bursoscopy, subscapular, of shoulder, 649

Capitate, fractures of, 379-380

Capitellum, fractures of, 388–390 osteochondritis dissecans of, 416, 417

Carcinoma, metastatic, to upper extremity,

Cardiovascular conditioning, 161 Carpal instability, in immature athlete, 420 Carpal tunnel release, arthroscopic,

769–784 Agee technique for, 776–777

Chow technique for, 770–776 clinical results of, 777–779 complications of, 779–780

long-term results of, 780–781 Japanese technique for, 776

current endoscopic techniques for, 770– 777

historical perspective on, 769-770 incentive for development of new technique of, 769

Carpal tunnel syndrome, 345-347, 348-349 in golfer, 102-103

Cartilage, growth, overuse injuries and, 403

Cell adhesion, for meniscal repair, 625 Cheiralgia paresthetica, 338 Chondromatosis, synovial, of upper

extremity, 437 Chondromyxofibroma, of upper extremity, 431

Clavicle, distal, excision of, arthroscopic, 637 Club(s), golf, 24-25, 67, 69, 76, 170-171 weighted, for golf exercises, 175 Coiling drill, 173 Conditioning exercises, for golfer, 66, 67 Condyle, fractures of, 394 lateral, fractures of, in immature athlete, Confidence, increasing of, improving golf swing by, 198 Contact dermatitis, golf-associated, 132 Coronoid fractures, 390 Crocodile twist, 172 Cryopreservation, in processing of meniscal allografts, 540 Cryotherapy, after shoulder arthroscopy, 657-658 Cubital tunnel syndrome, 347-351 Cyclist's palsy, mechanism of, 351, 352

De Quervain tenosynovitis, 213, 355-357, de Quervain's disease, in golfer, 90-92 treatment of, 91-92, 94-95 Deaths, on golf course, 1 Dermatitis, contact, golf-associated, 132 Digital flexors, stenosing tenosynovitis of, in golfer, 100-102 treatment of, 102 Digital nerves, injury to, 353-354 Digits, trigger, 364-366 Distance stick, 176 Dorsal compartment, first, 356-357 Dorsal impaction syndromes, 238-239 Downswing, golf, 20-22 acceleration in, 20-22 turn in, 22 Driving range practice, in prevent re-

injury of golfer, 51-52

Elbow, anatomy of, 307-309, 785, 786 and wrist, injuries and overuse syndromes of, in immature athlete, 401-423 arthrofibrosis of, arthroscopy in, 278 arthroscopy of, 77, 261-281, 785-797 common procedures in, 275-279 complications of, 796 diagnostic, technique of, 273-275 general set-up for, 271-272 indications for, 793-796 and contraindications to, 269-271 instrumentation for, 272-273 operative technique for, 790-792 portals for, 263-269, 270, 785-790 principles of creating, 263 postoperative complications of, 279-280

postoperative rehabilitation in, 279 preoperative planning for, 271 bony injuries of, 388-395 compressive neuropathies and tendinopathies in, 331-371 dislocations of, in immature athlete, 413, forearm, and wrist, of athlete, unusual problems of, 425-438 fractures of, arthroscopy in, 278-279 complications of, 407 golfer's. See Epicondylitis, medial. injury(ies) of, factors in, 65-67 in golf, prevention and treatment of, 65-83 treatment concepts in, 72-82 in immature athlete, 406-408 to throwing athlete, 307-329 lateral-sided, 321-328 medial-sided, 310-321 "Little League," 210, 321, 415-416 loose body removal from, arthroscopy for, 275-276 ossification centers of, development of, 406, 407 osteochondral lesions of, management of, arthroscopy for, 275, 276 osteochondritis dissecans of, 321 arthroscopy in, 275, 276 overuse injuries of, 65 in immature athlete, 414-417, 418 portal anatomy of, 263-269 posterior, pain in, associated with throwing in immature athlete, 416-417 posterolateral rotatory instability of. See Posterolateral rotatory instability, of elregional anatomy of, 261-263 synovectomy of, arthroscopic, 277-278 tendinitis of, surgery for, 76-77, 78-79, tennis. See Epicondylitis, lateral. tumors of. See Tumors, of elbow, wrist, and hand. valgus extension overload syndrome of, arthroscopy in, 276-277 wrist, and forearm, bony injuries of, 373-400 Elbow arthroplasty, total, in golfer, 185 Enchondroma, of upper extremity, 429,

Endochondral growth, patterns of, 405

Epicondyle, lateral, anatomy of, 291-292

Epicondylitis, in golfer, 4, 13, 67-72, 73

in immature athlete, 412-413, 414

Endurance exercises, after shoulder

arthroscopy, 656, 657

and medial, 283-305

lateral, 291-303

medial, fractures of, 393-394

Epicondylitis (Continued)
differential diagnoses and, 294–295
elbow arthroscopy in, 795
etiology and epidemiology of, 292–293
pathophysiology of, 293–294
physical examination in, 295–296
treatment of, 296–302
complications of, 302–303
medial, 210, 213
and lateral, 283–291
diagnosis of, 284, 285–286
differential diagnoses and, 286
etiology of, 283–284

history of, 283–284 history of, 284, 311 physical examination in, 284–285 prevention of, 287 treatment of, conservative, 286–287 surgical, 287, 289–290

complications of, 290–291 Epiphyseal plate, cell layers of, 403–404 in adolescents, 404 injuries of, 404–406

Equipment, golf, 24–25, 67, 69, 76, 169–177. See also specific types of equipment. Ethylene oxide, for secondary sterilization

of meniscal allografts, 542 Ewing's sarcoma, of upper extremity, 433,

Exercise(s), conditioning, for golfer, 66–67, 68–69

endurance, after shoulder arthroscopy, 656, 657

for deltoids, 159, 160 for muscular endurance, 154-159, 160 for participation in golf, 164-165, 166-

for shoulder complex, 157-158 for strengthening program, 154-159, 160 forearm, for strengthening muscle-tendon unit, 73, 74-75

home therapy, after shoulder arthroscopy, 664-666

isometric, isotonic and isokinetic, after shoulder arthroscopy, 658–659, 660 preventative, in golf, 147–162

range-of-motion, after shoulder arthroscopy, 664

rowing, horizontal, 158, 159 scapular stabilization, after shoulder arthroscopy, 659–660, 661

stretching, for golfer, 148-151 for upper extremity, 68-69 to prevent re-injury of golfer, 51 warm-up, for golfer, 66-67, 68-69, 147-

wrist, for strengthening muscle-tendon unit, 73, 74-75

Extensor carpi ulnaris tendinitis, 360-362 in golfer, 92-93 treatment of, 93, 96, 97-99

Extensor digiti minimi tendinitis, 360 Extensor indices proprius syndrome, 359–360 Extensor pollicis longus tendinitis, 359

Facet joint, arthropathy of, degenerative changes in, 50 diagnosis of, 50-51 treatment of, 51

Fear, of main disruption of golf swing, 197–198 training of mind to overcome, 198–201

Fibrin clot, for meniscal repair, 623–625 enhancement, formation of, 504–507 preparation and insertion of, in outsideto-inside meniscal repair technique, 475–476, 477

Fibrin glue, synthetic, for enhancement of meniscal repair, 507

Fibrochondrocyte cultures, for meniscal repair, 627-628

Fibroma, nonossifying, of upper extremity, 432

Fibrous dysplasia, of upper extremity, 431–432

Flexor carpi radialis tendinitis, 362, 363 in golfer, 93–99 treatment of, 97–99, 100–101

Flexor carpi ulnaris tendinitis, 363–365 in golfer, 99–100 treatment of, 99–100

Flexor tenosynovitis, in golfer, 102–103 Football, injuries to upper extremity associated with, 213 Foot (Feet), and ankle, arthroscopy of,

portals for, 805-806 and ankle considerations, in golf, 129-

arthroscopy of, subtalar, 819–820 biomechanics of, in golf swing, 129–131, 132, 133

first metatarsophalangeal joint of, arthroscopy of, 820 problems of, in golf, 131–143

Footwork, golf, 15–16

Forearm, bones of, fractures of both of, 386-387

bony injuries of, 382-388 elbow, and wrist, of athlete, unusual problems of, 425-438

wrist, and elbow, bony injuries of, 373–400

Forearm bands, counterforce, 73
Forearm exercises, for strengthening muscle-tendon unit, 73, 74–75

Fracture(s), bicolumn, 394 condylar, 394 coronoid, 390
Galeazzi, 386
intra-articular, of radiocarpal joint, in immature athlete, 420
Monteggia's, 387–388
of capitale, 379–380
of capitellum, 388–390
of distal humerus, 393–394
of distal radius, 382–385
of elbow, arthroscopy in, 278–279
complications of, 407

of forearm, both bones, 386-387 of hamate, 377-379

in immature athlete, 420 of hamate hook, in golfer, 104-107

treatment of, 106
of lateral condyle, in immature athlete,

410 of medial epicondyle, 393-394

of olecranon, 394-395 of pisiform, 381

of radial head, 390-393 in immature athlete, 412

of trapezium, 380-381 of ulna, isolated, 387 of wrist, in golfer, 104-107

scaphoid, 373-377

in immature athlete, 417-419 supracondylar, 393

in immature athlete, 407–410, 411 triquetral, 379

Freeze drying of meniscal tissue, in processing of meniscal allografts, 540–541

Fresh freezing of meniscal tissue, in processing of meniscal allografts, 540

Galeazzi fractures, 386 Gamma irradiation, for secondary sterilization of meniscal allografts, 542 Ganglion(s), dorsal, 230–232, 236–237 occult dorsal carpal, 236–238, 239

Gardner procedure, modified, in tendinitis of elbow, 77

Giant cell tumors, of upper extremity, 428, 429

Glenohumeral internal and external rotation, 159, 160

Glenohumeral joint, anatomy of, 701 avulsion of, arthroscopic Bankart repair in, 743–749

in disruption of inferior glenohumeral ligament, 740

instability of, development of, 740-742 inferior glenohumeral ligaments and, 740-741

surgical treatment of, 742–743 stability of, inferior glenohumeral ligaments and, 737–738, 740 stabilizers of, 737-740 Glenohumeral ligaments, inferior, glenohumeral joint instability and, 740-741

glenohumeral joint stability and, 737-738, 740

Glenoid, bony exostosis of, 697

Glutaraldehyde preservation, in processing of meniscal allografts, 541

Gluteal muscles, strengthening of, 156–157 Golf, for senior player, 163–178

injuries in, frequency of, 1-7 in amateur golfer, 3, 5 in professional golfer, 2-3 mechanisms of, 3, 4 treatment of, 5-6

injuries to upper extremity associated with, 213

instruction in, 165-169

participation in, for all ages, 163–164 with hip replacement, 164, 165

preparation for, exercises for, 164-165, 166-177

proper swing techniques and biomechanics of, 9-26

Golf balls, 171-177

Golf club(s), 24-25, 67, 69, 76, 170-171 weighted, for golf exercises, 175

Golf swing(s), biomechanics of foot in, 129–131, 132, 133

classic, 38, 40 goal of, 10-11

main disruption of, fear of, 197-198

mechanics of, 38-46, 60-61 elbow injuries and, 66

mental problems associated with, and solutions to, 194–201

mind-body connection of, 191-201 modern, 38, 41

myoelectric analysis of, 39–46 practicing of, while waiting to tee off, 52

problems of, complications of, 195-197 solution to improving, 198

vulnerabilities in lead arm during, 62 wrist biomechanics of, 85–86, 87, 88, 89,

Golfer(s), older, shoulder in, 56-59 senior, 163-178

younger, shoulder in, 59-60 Golfer's elbow. See Epicondylitis, medial.

Grip, golf, 11–14 strong or neutral, 12, 13

tension of, 12-14 types of, 11-12

Growth, injuries related to, 403–406 Growth factors, for meniscal repair,

625-626 Gymnastics, injuries to upper extremity associated with, 214-216 Haglund's deformity, golf-associated, 140, 141

treatment of, 140-141, 142 Hallux rigidus, golf-associated, 136

treatment of, 136–137 Hallux valgus, golf-associated, 137–139 treatment of, 138–139

Hamate, fractures of, 377-379 in immature athlete, 420

Hamate hook fracture, in golfer, 104-107 treatment of, 106

Hamstrings, stretch for, 151, 153, 170
Hand, tumors of. See Tumors, of elbow,
wrist, and hand.

Hip, flexor stretch, 151, 152

Hip arthroplasty, total, in golfer, 180–182 Home therapy exercises, after shoulder

arthroscopy, 664-666

Humerus, distal, developing, bony anatomy of, 403 fractures of, 393–394

Injury(ies), growth-related, 403-406 sports-specific. See *Sports-specific injuries* and types of injuries.

Instruction, in golf, 165-169 Interosseous nerve syndromes, 337-338,

342–344 Intersection syndrome, 217, 218, 357–359 in golfer, 103–104 treatment of, 104

Iontophoresis, in tendon injuries of elbow,

Isometric, isotonic, and isokinetic exercises, after shoulder arthroscopy, 658–659, 660

Joint(s), radiocarpal, intra-articular fractures of, in immature athlete, 420 radioulnar, distal, and ulnocarpal articulation, injuries of, 251-256 total replacement of, and golf, 179-190 ulnocarpal, and distal radioulnar joint, injuries of, 251-256

Kienbock's disease, 381–382, 383 in immature athlete, 420 Knee, anterior cruciate ligament-deficient, meniscal tears in, chronic, 574, 575 contraindications to treatment of, 583–585 diagnosis of, 575–578 history taking in, 575–576 indications for treatment of, 583–585 management of, 573–593 meniscal repair in, 579–583 results of, 581–583 technique of, 580 partial resection of meniscus in, 578 physical examination of meniscus in, 576–577 post-treatment complications of, 587 post-treatment rehabilitation in,

post-treatment rehabilitation in, 586–587, 596 radiographs in, 577–578 tears to leave alone in, 578–579

tears to leave alone in, 578–579 treatment options in, 578–583 unstable, algorithm for treatment of, 583–586

natural history of, 573 blind spot in, 517 injuries of, in golf, 111-128

bone scans in, 116 case histories of, 120-123 45-deg flexion radiographs in, 113-

diagnosis of, 117-118
golf treatment for, 123-127

incidence of, 111-113 methods of study of, 113 results of study of, 116-120

Knee arthroplasty, total, in golfer, 182-184 Knee press, double, 169

Laser-tissue interaction, 531-532
Laser "welding", of meniscal tissue, for
enhancement of meniscal repair, 507
Lasers, for meniscal repair, 531-535
Leg stretch, for hamstrings and lower
back, 170

Leg(s), pain in, in herniated disc, 48-49 Ligament(s), inferior glenohumeral, glenohumeral joint instability and, 740-741

glenohumeral joint stability and, 737–738, 740

of ankle, injuries of, golf-associated, 142–143

treatment of, 143 reconstruction of, arthroscopic findings in, 799-804

of shoulder, 675–676 of wrist, injuries of, 762–764 Lipoma, of upper extremity, 436 Liposarccma, in upper extremity, 437 "Little League elbow," 210, 321, 415–416

Low back, leg stretch for, 170 Low back extensor muscles, strengthening exercise for, 154, 155

Low back injuries, in golf, 2 Low back pain, etiologic factors in, 46-47 mechanical, in golfer, 47
Lumbar disc(s), herniated, in golfer, 48
treatment of, 49
Lumbar spine, forces affecting, in golf, 42
loads of, during golf swing, 46
Lunatotriquetral instability, 245–248
Lymphoma, of upper extremity, 433
Lyophilization of meniscal tissue, in
processing of meniscal allografts,
540–541

Magnetic resonance imaging, in shoulder problems, 706 in sports-related injuries of wrist, 755– 756 of labral lesions, 691

Martial arts, injuries to upper extremity associated with, 216

Medial nerve, anatomy of, 333, 339-340,

compression of, 340–345 Meniscal allografts, immunology of, 538–539

insertion of, in outside-to-inside meniscal repair technique, 475, 476

processing of, 539–541 cryopreservation in, 540 freeze draing of menical tissue

freeze drying of meniscal tissue in, 540-541

fresh freezing of meniscal tissue in, 540

fresh tissue transplantation in, 539 glutaraldehyde preservation of meniscal tissue in, 541

lyophilization of meniscal tissue in, 540-541

secondary sterilization of, 541–546 transplantation of, 537–556 animal studies of, 542–544 clinical studies of, 544 contraindications to, 547 failures in, and complications of, 551 graft donors for, 548 indications for, 546–547 preoperative assessment for, 547–548 preparation of bed for, 548–549

preparation of bed for, 548-549 rehabilitation following, 549 surgical technique for, 547-549 University of Michigan experience

with, 549-551 via arthrotomy or arthroscopic technique, 548

Meniscal templates, 564–567
Meniscectomy(ies), osteoarthritis and,
573–574
partial arthrescenty and 450

partial, arthroscopy and, 450 total, history of, 446–448 Meniscoid, of wrist, 238–239 Meniscus, biochemistry of, 559–560 cellularity and vascularity of, 560 environment of, 560–561 function of, 469–470, 537 biomechanical studies of, 448–450 microstructure of, 558–559 partial resection of, in meniscal tears in anterior cruciate ligament-deficient knee, 578 physical examination of, in meniscal

physical examination of, in meniscal tears in anterior cruciate ligamentdeficient knee, 576-577

preservation of, in meniscal tears in anterior cruciate ligament-deficient knee, 574

regeneration of, 563-564 in vivo studies of, 567-569

repair of, advances in, 451–452 angiogenin for, 626 arthrofibrosis and 615–616

arthrofibrosis and, 615–616, 617 arthroscopic, 613–614 complications of, 613–619

documentation of, 614 nature of, 616

neurovascular structures and, 616 reported rates of, 614-616

arthroscopic all-inside, 483-498, 614 arthroscopy and portal placement for, 485-487, 488

clinical results of, 497 indications for, 484 knot tying in, 491–494, 495, 496 patient preparation for, 485

postoperative care following, 494–497

suturing in, 488, 489–491, 492, 493 tear preparation for, 487–488 basic science of, 470–472 cell adhesion for, 625 early reports of, 445–446

endogenous tissue adhesives for, 623-625

endothelial cell growth factor for, 626 enhancement techniques in, 499-510 debridement for, 500-501 fibrin clot formation in, 504-507

fibrin clot formation in, 504-507, 623-625

laser "welding" of meniscal tissue in, 507 synovial abrasion technique in, 503–

504, 505 synovial pedicle flaps in, 502-503

synthetic fibrin glue in, 507 trephination in, 502 vascular access techniques in, 501–

503 fibrin clot for, 504-507, 623-625 future investigations in, 452

future of, 621–630 historical perspective on, 445–453 Meniscus (Continued) indications for, 472-473 isolated, accelerated rehabilitation after, discussion of, 606-609 materials and methods for, 603-605 protocol for, 605 results of, 605-606, 609 lasers for, 531-535 literature review on, 532-533 mitogens in, 626 platelet-derived growth factor for, 625-626 rehabilitation after, 595-612 conservative, 600 in bucket-handle tears, 601, 602 in locked bucket-handle tears, 601selection criteria and surgical technique of, 596-600 synthetic tissue adhesives for, 622-623 techniques for, 473 tissue culture for, 626-628 using inside-to-outside technique, 455-467, 614, 616 arthroscopic technique in, 460-464 complications of, 465 future directions in, 465-466 indications for, 455-456 posterolateral surgical approach for, 458-460, 461, 462 posteromedial surgical approach for, 457-458, 459 postoperative care following, 464-465 results of, 465 tear preparation for, 456, 457 using outside-to-inside technique, 469-481, 614 and meniscal allograft insertion, 475, 476 fibrin clot preparation and insertion in, 475-476, 477 future research in, 479 indications for, 474-475 needle placement and suturing in, 473-474, 475 postoperative care following, 476-477 results of, 478 two-needle method in, 475 replacement of, 557-571 by allografts, 561-562 by autografts, 561 by synthetic polymeric structures, 562-563 by templates, 564-567 by xenografts and reconstituted structures, 563

shape of, 557

structure of, 557-558 tears of, avascular, arthroscopic repair of, complications of, 517 central one-third, guidelines for repair of, 519-523 complex, arthroscopic repair of, complications of, 517 arthroscopic suturing techniques in, 515-516 arthroscopic techniques for, 516-519 guidelines for repair of, 519-523 management of, 511-530 clinical study of, 524 complications of, 527 patient selection for, 524-525, 528 results of, 525-527 repair of, rehabilitation following, 523-524 repair specifics in, 520-523 repair techniques in, 515-516 concomitant injuries in, evaluation of, 520 in deficient anterior cruciate ligament. See Knee, anterior cruciate ligament-deficient. management of, history of, 512-513 repair techniques for, 512-513 patterns of, 513-515 vascularity of, and repair of, 450-451 Midcarpal joint, portals for arthroscopy of, 757-758 Mind, of golfer, processing by, 192-194 training of, to overcome fear, 198-201 Mind-body connection, in golf, 191 in golf swing, 191-201 Mitogens, for meniscal repair, 626 Monteggia's fracture, 387-388 Morton's neuroma, golf-associated, 134-136 treatment of, 136 Motion, postoperative limitation of, in meniscal repair, 518-519 Muscle-tendon conditioning, in management of elbow injuries, 73, 74 Muscle-tendon imbalances, and overuse injuries, in immature athlete, 402 Muscle(s), low back extensor, strengthening exercise for, 154, 155 of rotator cuff, 701-702 of shoulder, 701-702 trunk, myoelectric activity of, during golf swing, 43, 44 Muscular endurance, exercises for,

Neck, extensors, strengthening exercise for, 154, 155 flexion/extension, stretch for, 149, 150

154-159, 160

lateral flexion, stretch for, 149 rotation, stretch for, 148–149 Nerve(s). See also specific nerves. injuries to, in meniscal repair, 518, 616 peripheral, malignant tumors of, in upper extremity, 437

Neurapraxia(s), 332 digital, 353-354

Neurilemmoma, of upper extremity, 434, 436

Neuroma, Morton's, golf-associated, 134–136

treatment of, 136

Neuropathy(ies), compressive, 332–354 and tendinopathies, in elbow and wrist, 331–371

Neurotmesis, 332

Nonsteroidal anti-inflammatory agents (NSAIDs), in elbow injuries, 73–76 in tendon injuries, 32–33

Nutritional factors, and overuse injuries, in immature athlete, 402–403

Obesity, and immature athlete, 403
Olecranon fractures, 394–395
Osteoarthritis, elbow arthroscopy in, 794
meniscectomies and, 573–574
Osteochondral lesions, of talus,
arthroscopy of ankle in, 813–818
Osteochondritis dissecans, of capitellum,
416, 417
of elbow, 321

arthroscopy in, 275, 276 Osteochondroma, of upper extremity, 429 Osteoid osteoma, of upper extremity, 428,

Osteosarcoma, of upper extremity, 432 Overuse, definition of, 331

Overuse syndromes, and injuries of elbow and wrist in immature athlete, 401-423

causes of, 401 of wrist, in golfer, 86-104 stages of, 86-88 risk factors for, 402-403 symptoms of, 401-402

Paratenonitis, 29–30
Pedicle flaps, synovial, for enhancement of meniscal repair, 502–503
Performance anxiety, in golf, 197–198
Physical examination, of meniscus, in meniscal tears in anterior cruciate ligament-deficient knee, 576–577
Pinch-and-grip study, for arthroscopic carpal tunnel release, 779

Pisiform, fractures of, 381 Plantar fascia, endoscopic release of, 820–821 Plantar fasciitis, golf-associated, 139, 140

treatment of, 139-140

Plyometrics, after shoulder arthroscopy, 661–662

PNF (proprioceptive neuromuscular facilitation), after shoulder arthroscopy, 661, 663

Posterior interosseous nerve syndrome (PINS), 337–338

listal, 338

Posterolateral rotatory instability, of elbow, diagnosis of, 322–323 etiology of, 321–322 surgical repair of, 323–327 results and complications of, 327–328

Posture, golf, 14-16 Practice, golf, 23-24

goals of, 24 warm-up in, 23-24

Processing, mental, of golfer, 192–194 Pronator syndrome, 340–342 Push-up with a plus, 157–158

Putting practice, in prevent re-injury of golfer, 52

Racquet sports, injuries to upper extremity associated with, 216-217

Radial head, fractures of, 390–393 in immature athlete, 412 Radial nerve, compression of, 333–339 Radial nerve palsy, high, 334

Radial nerve syndrome, superficial, 338–339 Radial tunnel, anatomy of, 335

Radial tunnel syndrome, 334–336, 337 Radiocarpal joint, intra-articular fractures of, in immature athlete, 420

portals for arthroscopy of, 757 Radiography, in meniscal tears in anterior cruciate ligament-deficient knee, 577-578

in shoulder problems, 704–706 Radiologic studies, in sports-related injuries of wrist, 755–756

Radioulnar joint, distal, and ulnocarpal articulation, injuries of, 251–256

Radius, distal, fractures of, 382–385 injuries of, in immature athlete, 419, 420

proximal, injuries of, in immature athlete, 410-412

Range-of-motion exercises, after shoulder arthroscopy, 664

Rehabilitation, after arthroscopy of shoulder, 655-672 Rehabilitation (Continued) phases of, 662, 663 after meniscal repair, 595-612 in complex meniscal tears, 523-524 following arthroscopic decompression of shoulder, 709-710 R.I.C.E. Principle, in management of elbow

injuries, 72

Rotator cuff, calcific tendinitis of, arthroscopic treatment of, 688-689 disorders of, and coexistent shoulder pathology, arthroscopic diagnosis of, 716-717 arthroscopic treatment of, 717 and cuff-related pathology of, arthroscopic treatment of, 717-722

arthroscope in, 680-688 arthroscopic treatment of, 715-736 applications of, 716 indications for, 722 surgical technique in, 722-732

diagnosis of, 716

factors influencing treatment decisions in. 707

history of, 715-716

intra-operative arthroscopic evaluation in, 717

treatment of, 707

impingement of, arthroscopic subacromial decompression in, 719, 726-732 factors increasing, 718-719 open decompression in, 719 primary, diagnosis of, 680-681, 682 secondary, diagnosis of, 681-682 surgical procedures in, 719

muscles of, 701-702

tears of, 637-641

arthroscopic or mini-open repair of, rehabilitation after, 670 arthroscopic repair of, 640, 641-644 arthroscopic techniques in, 719-720, 725-726

arthroscopically assisted mini-open cuff repair in, 720-722, 731 Rowing exercise, horizontal, 158, 159

Sarcoma, Ewing's, of upper extremity, 433, 434-435

Scaphoid, fractures of, 373-377 in immature athlete, 417-419 Scapholunate dissociation, 241-245, 246,

Scaption exercise, for deltoids, 159, 160 Scapular plane elevation, for deltoids, 159,

Scapular stabilization exercises, after shoulder arthroscopy, 659-660, 661 Scapulothoracic bursitis, in throwing athlete, 699

Schwannoma, of upper extremity, 434, 436 Senior golfers, 163-178 Setup, golf, 14-16

Shoe(s), golf, 144-145 basic styles of, 144-145

design criteria recommended for, 144 fitting of, 145

Shoulder, adhesive capsulitis of,

arthroscopic treatment of, 648-649

anatomy of, 701-702 arthroscopic decompression of, 701-713 rehabilitation following, 709-710 results of, 710-711

technique for, 707-709, 710

arthroscopy of, 635-653

in throwing athlete, 673-700 rehabilitation of athlete after, 655-672

biomechanics of, 702-703 bony anatomy of, 674-675

degenerative aging process and, 56-59 distal clavicle of, arthroscopic excision

of, rehabilitation after, 668-669 impingement of, arthroscopic treatment in. 707-711

classification of, 703

internal, 647-648 signs of, 704

impingement test in, 706

injury(ies) of, arthroscope in diagnosis of, 678-680

in golf, 2, 4, 5

in overhead sports, 55 risk of, in golfer, 55

instability-impingement overlap in, 647 instability of, arthroscopic stabilization procedures in, 695-696

arthroscopic treatment of, 644-647 causes of, 644

in throwing athlete, 694

intraarticular debridement of, rehabilitation after, 663-666

labral lesions of, arthroscopic diagnosis of, 690-692

arthroscopic treatment of, 692-694 laxity of, in younger golfer, 59-60

ligaments of, 675-676

muscles of, 701-702

overuse injury(ies) of, in golfer, 56

pain in, in golf, 55-63

pathophysiology of, 703 posterior capsule of, stretch for, 151, 153

problems of, diagnostic tests in, 706-707

history taking in, 703-704 physical examination in, 704 radiography in, 704-706

soft tissues of, 676

subscapular bursoscopy of, 649

Shoulder arthroplasty, total, in golfer, 184-185

Shoulder complex, exercises for, 157-158

Side bends, 167

Sit-up, diagonal, for muscle strengthening, 154, 156

partial, for muscle strengthening, 154, 155

SLAP (superior labrum anterior to posterior) lesions, arthroscopic diagnosis of, 691–692, 693

arthroscopic repair of, rehabilitation after, 669–670

arthroscopic treatment of, 692-694 classification of, 691

Soft tissues, of anterior ankle, impingement lesions of, arthroscopy in, 810-811

of shoulder, 676

of wrist, injuries of, 235-259

Spine, anatomy of, 45-46

lumbar, forces affecting, in golf, 42 loads of, during golf swing, 46 Spondylosis, in golfer, 49–50

Sports-specific injuries, to upper extremity, 207-218

background of, 207–208 diagnosis of, 208–209 in baseball, 210–211

in basketball, 214–215 in bicycling, 211–214

in football, 213

in golf, 213 in gymnastics, 214–216 in martial arts, 216

in racquet sports, 216-217 in weightlifting, 217-218

mechanisms of, 209 Squats, 157

Stenosing tenosynovitis, of digital flexors, in golfer, 100–102 treatment of, 102

Sterilization, secondary, of meniscal allografts, 541–546

Steroids, instillation of, in tendinitis of elbow, 76

Strengthening program, exercises for, 154–159, 160 Stretching exercises for golfer, 148–151

Stretching exercises, for golfer, 148–151 for upper extremity, 68–69 to prevent re-injury of golfer, 51

Subacromial decompression, arthroscopic, 636–637, 719, 726–732

Supracondylar fractures, 393 in immature athlete, 407–410, 411

Suture anchors, in arthroscopic Bankart repair, 747

Sutures, location of, in meniscal repair, 521-522 multiple, in meniscal repair, 522

Suturing technique(s), and needle placement, for outside-to-inside meniscal repair, 473–474, 475 arthroscopic, for complex meniscal tears, 515-516

Swing, golf. See Golf swing. Synovectomy, arthroscopic, of elbow, 277–278

Synovial abrasion technique, for enhancement of meniscal repair, 503-504, 505

Synovial chondromatosis, of upper extremity, 437

Synovial pedicle flaps, for enhancement of meniscal repair, 502–503 Synovitis, elbow arthroscopy in, 793

Tack, bioabsorbable, in arthroscopic Bankart repair, 746-747 Takeaway, golf, 16-18

Talus, osteochondral lesions of, arthroscopy of ankle in, 813-818

Tendinitis, 29 Achilles, golf-associated, 141–143

calcific, of rotator cuff, arthroscopic treatment of, 688-689

extensor carpi ulnaris, 360–362 in golfer, 92–93, 96, 97–99 extensor digiti minimi, 360 extensor pollicis longus, 359 flexor carpi radialis, 362, 363

in golfer, 93–99 treatment of, 97–99, 100–101

flexor carpi ulnaris, 363–365 in golfer, 99–100 treatment of, 99–100

in golf, 27–35, 67, 86–104 in immature athlete, 420

of elbow, surgery for, 76-77, 78-79, 80-82

of wrist, in golfer, 86-104 stages of, 86-88

Tendinopathies, 354–366 and compressive neuropathies, in elbow and wrist, 331–371

exterior compartment, 355-362 flexor compartment, 363-366

Tendinosis, 30 Tendocytes, 31

Tendonopathy, in golfers, 67

Tendon(s), anatomy of, 27–29 biceps, injuries of, arthroscopic management of, 696–697

failure of, 30-32

injuries of, treatment of, 32-33

pathologic conditions of, 29-30 rupture of, 31

Tennis elbow. See Epicondylitis, lateral.

Tenosynovitis, De Quervain's, 213, 355–357, 358

Tenosynovitis (Continued) flexor, in golfer, 102–103 stenosing, of digital flexors, in golfer, 100–102 treatment of, 102

Thermotherapy, after shoulder arthroscopy, 658

Throwing, biomechanics of, 309–310 posterior elbow pain associated with, in immature athlete, 416–417

Throwing athlete, arthroscopy of shoulder in, 673-700

Thumb, bowler's, 353, 354 Tinea pedis, golf-associated, 132–133

Tissue adhesives, endogenous, for meniscal repair, 623–625 synthetic, for meniscal repair, 622–623

Tissue culture, for meniscal repair, 626–628 Tissues, fresh, transplantation of, in processing of meniscal allografts, 539

Toe(s), lesser, deformities of, golfassociated, 133–134, 135, 136 treatment of, 134

Total elbow arthroplasty, in golfer, 185 Total hip arthroplasty, in golfer, 180–182 Total joint replacement, and golf, 179–190 Total knee arthroplasty, in golfer, 182–184 Total shoulder arthroplasty, in golfer, 184–185

Trapezium, fractures of, 380-381 Trephination, for enhancement of meniscal repair, 502

Triangular fibrocartilage, injury of, 251-256 Trigger digits, 364-366 Triquetral fractures, 379

Trunk, flexion/extension, stretch for, 151, 152

hip, and chest stretch, 149, 151 lateral, stretch for, 149, 150

Tumors, of elbow, wrist, and hand, clinical presentation of, 426–427 commonly occurring, 427–428 extraosseous benign, 434–437 extraosseous malignant, 437 frequency of, 425–426

intraosseous benign, 428–432 intraosseous malignant, 432–433 work-up in, 427 primary, malignant, of upper extremity,

433 Turning drill, 174

Ulna, distal, injuries of, in immature athlete, 420, 421 isolated fracture of, 387 Ulnar collateral ligament, injuries of, diagnosis of, 314–316 etiology of, 314 treatment of, nonoperative, 316 surgical, 316–320 results and complications of, 320–321

Ulnar nerve, anatomy of, 347, 351, 352 compression of, 347-353 entrapment of, 347 Ulnar translation, 248-249, 250 Ulnar tunnel syndrome, 351-353

Ulnocarpal articulation, and distal radioulnar joint, injuries of, 251-256

Ultrasonography, after shoulder arthroscopy, 658 in diagnosis of shoulder problems, 706– 707

Upper extremity(ies), giant cell tumors of, 428, 429

injuries of. See Sports-specific injuries, to upper extremity. osteoid osteoma of, 428, 430

Valgus extension overload syndrome, 276–277, 311–313 elbow arthroscopy in, 795 Valgus stress, 321, 322 Valgus stress test, 314–315 Vascular lesions, benign, of upper extremity, 437

Warm-up exercises, for golfer, 66-67, 68-69, 147-148
Wartenberg's syndrome, 338
Weight shift, golf, 19-20
Weightlifting, injuries to upper extremity associated with, 217-218
Wrist and ellow injuries and overuse

Wrist, and elbow, injuries and overuse syndromes of, in immature athlete, 401-423

arthroscopy of, **753–768** technique of, **756–759** athletic injuries of, arthroscopy in, **219–**

results of, 232 diagnostic studies in, 221, 222 in immature athlete, 417–420, 421 mechanisms of, 219–220 nonoperative treatment of, 221 operative treatment of, 221–222, 223

physical examination in, 220-221 biomechanics of golf swing, 85-86, 87, 88, 89, 90

bony injuries of, 373–382 compressive neuropathies and tendinopathies in, 331–371 elbow, and forearm, of athlete, unusual

problems of, 425-438

forearm, and elbow, bony injuries of, 373-400

fracture of, in golfer, 104–107 ganglion of. See Ganglion(s). injury(ies) of, golf-induced, 2, 5, **85–109** sports-related, cause and classification

ports-related, cause and classification of, 754 diagnostic evaluation in, 755 history taking in, 754 incidence of, 753–754 nonoperative management of, 756 pathology of, 759–766 physical examination in, 754–755 preoperative evaluation in, 754–756

radiologic studies in, 755-756 instability of, 239-250

intracapsular anatomy of, 758–759, 760–761, 762

ligaments of, injuries of, 762–763 cases illustrating, 763–764 meniscoid of, 238–239

osseous/cartilagenous injuries of, 765-766 peripheral fibrocartilage complex of, tear of, 225-230, 231

radial triangular fibrocartilage complex of, tear of, 222-225, 226-227

soft-tissue injuries of, 235-259 mechanisms of, 236

tendinitis of, in golfer, 86-104 stages of, 86-88

triangular fibrocartilage of, injuries of, 760-761

case illustrating, 761, 763 mors of. See Tumors, of elbow, a

tumors of. See Tumors, of elbow, wrist, and hand.

Wrist exercises, for strengthening muscletendon unit, 73, 74–75

"Yips," 1-2

Zostrix cream, in elbow injuries, 76